

ESB 5127 Project Descriptions

Discussed by the Flood Authority Project Subcommittee 6.12.12

SUBSECTION (2) UP TO \$1,875,000 FOR "REPAIRING AND MODIFYING LEVEES AND DIKES, INCLUDING BUT NOT LIMITED TO, THE AIRPORT LEVEE, LEVEES PROTECTING THE ADNA AND BUCODA AREAS."

Airport Levee (#26-vii on the Project Matrix)

Location: City of Chehalis

Ownership: Chehalis-Centralia Airport (City of Chehalis, Lewis County)

Project description/benefits (from Chehalis-Centralia Airport Letter, June 6, 2012):

Over the past few years the Chehalis-Centralia Airport has been working towards a "shovel ready" project for enhancing the Airport Levee. This enhancement project is designed to provide protection against a 100 year flood event for the Airport and to a lesser degree I-5. Civil plans for this project have been completed by RB Engineering and involve raising the existing 2.3 miles of earthen levee to an elevation three feet above the 100 year flood level as recently identified by FEMA. This is accomplished by widening the base of the levee and constructing it higher as to maintain existing side slopes. In addition to the existing levee improvements, this project would involve elevating Airport Road along the south side of the Airport including the replacement of all utility infrastructures. The cost estimate for this project is approximately \$3.2 million with the roadway improvements responsible for the majority of the cost. The Airport has not had a chance to complete the hydraulic analysis to identify any potential impacts caused by this project, so we are proposing a scaled version of this project that we believe will not have any measurable change to any other area in the basin in the available hydraulic model and will fit within the Engrossed Senate Bill 5127 budget.

Representatives from Lewis County, City of Chehalis, Chehalis-Centralia Airport, and WSDOT recently met to discuss a project that could be proposed to the Flood Authority and the Chehalis Tribe as outlined in Senate Bill 5127. We all agree that a project elevating the Airport Levee is not practical within the timeframe set by ESB 5127 because it does not allow for the identification and mitigation of potential impacts. However, it is agreed that improving the existing levee by completing the required width expansion, but not causing an increase in elevation, could be completed within the narrow timeframe to create jobs. This project would enhance safety by providing a sounder levee for the protection of the Airport and I-5. It would also allow for future enhancement at a reduced cost, and would fit within the appropriations of ESB 5127 including the consideration of the levees protecting the Adna and Bucoda areas. This improvement project would not involve any work on Airport Road, would not create any new levees, and it is assumed that it would not cause any measurable impacts beyond the impact of placing the required material for the base expansion on the inside of the levee. A detailed cost estimate is enclosed showing an estimated construction cost of \$1,240,000 along with a cross section illustrating the enhancement of the levee versus the proposed base improvement.

Approximate cost: \$1,240,000.

Next steps: The project will be managed and administrated by the Chehalis-Centralia Airport with the assistance of RB Engineering. Construction plans will be completed and then the project could be placed out for bid. Depending on the season timeframe, construction would commence either this summer or early next spring.

Project Subcommittee Recommendation (June 12, 2012) : Leave on the list for possible funding under ESB 5127.

Adna Levee (#26-vi on the Project Matrix)

Location: Lewis County, Adna Area

Ownership: Washington State Parks owns the Willapa Trail System; the system is within Lewis County.

Project description/benefits: Project consists of cleaning the drainage path way along the historic rail grade (now Willapa Trail System) to prevent 2007 level flooding that occurred when the blocked drainage was ineffective in conveying flood waters and allowed for more severe flooding to the Adna High School and surrounding households. This system has been historically maintained by the rail system owner preventing the type and extent of flooding that happened in the 2007 flood, but had fallen into disrepair and was unable to convey stormwater effectively during the event. This project will restore the drainage pathway to approximately 7500 lineal feet of the drainage system and replace culverts as needed in order to provide historic levels of protection to the surrounding areas.

Next steps: Begin steps necessary to permit this project including cultural resources evaluation, and JARPA for HPA.

- The Willapa Trail System is owned by Washington State Parks. Lewis County is proposing to use County Forces or Contract out the project using Jobs Bill money; however, State Parks will need to approve.

Approximate cost: Lewis County Engineers and field personnel developed a cost estimate of \$244,145 including permitting costs (see attachment).

Project Subcommittee Recommendation: Leave on the list for possible funding under ESB 5127. Need to talk with State Parks, and determine potential future O&M costs.

Bucoda Levee (#26-v on the Project Matrix)

Location: Bucoda North end

Ownership: Town of Bucoda.

Project description/benefits: Reduces flood levels in town. Repaired by Corps of Engineers in 2002; additional work needed to determine status of levee.

Approximate cost: To be determined

Next steps: Need design to determine precise flood benefits and cost estimates.

Project Subcommittee Recommendation: Leave on the list for possible funding under ESB 5127.

Wishkah Road (Kersh) (#24 on the Project List)

Location: Grays Harbor County

Ownership: Some private ownership near the river

Project description/benefits: Reduce flooding to the Wishkah Road. 1). Land acquisition to provide more flood plain storage of two parcels located right along the water. ~~2). Approximately nine homes would be helped by raising them above the flood plain. 3). Replacement culvert near Kersh's property would have to be a six foot diameter pipe and approximately 90 feet long and relocating Aberdeen's transmission water main.~~ 4). Construct a sheet pile wall (dike) 1000 feet long.

Approximate cost: 1). \$42,000 ~~2). \$30,000 per home or \$270,000 total 3). \$500,000~~ 4). \$1,100,000

Project Subcommittee Recommendation: Options 2 and 3 were stricken by the Project Subcommittee on 6/12/12 as not fitting this category. Total for Options 1 and 4: \$1,142,000. Leave on the list for possible funding under ESB 51278.

Next steps: Work to determine project feasibility?

Humptulips Dike Road (#26-I on the Project Matrix)

Location: Grays Harbor County

Ownership:

Project description/benefits:

Approximate cost:

Next steps

Project Subcommittee Recommendation: Terry to check for more detailed information with respect to the selection criteria. Source is from Grays Harbor County Draft Hazard Mitigation Plan 2001.

Trail/Dike behind Burger King (#26-ii on the Project Matrix)

Location: Aberdeen - East bank of Wishkah between Wishkah and Heron

Ownership:

Project description/benefits: The Burger King property is located between the Wishkah and the Heron street bridges. Extreme high water can top the bank and flood the adjacent commercial property. A small dike or elevated walkway along the river would help keep the river in its banks. Prevents river flooding from entering that section of Aberdeen.

Approximate cost: \$123,000

Next steps: 24 months

Project Subcommittee Recommendation: More information is needed from the City of Aberdeen with respect to the selection criteria. Source is from the City of Aberdeen Public Works Master Project List (January 2011)

Dike bank of Wishkah north of Hwy. (#26-iii on the Project Matrix)

Location: Aberdeen - East bank of Wishkah from Kansas Street to Chehalis street

Ownership:

Project description/benefits: The northeast area of Aberdeen is partially protected by dike along the Chehalis behind the Wal-Mart/Gateway Plaza mall area; however when extreme conditions exist the water will flood the area from the Wishkah river north of the highway. Raising the local road elevations adjacent the Wishkah River and installing tide gates would create a dike which would reduce flooding frequency. Prevents river flooding from entering that section of Aberdeen.

Approximate cost: \$235,000

Next steps: Concept Plan – 36 months

Project Subcommittee Recommendation: More information is needed from the City of Aberdeen with respect to the selection criteria.. Source is from the City of Aberdeen Public Works Master Project List (January 2011).

Market Street Dike (#26-iv on the Project Matrix)

Location: Aberdeen - Market Street from D Street to 1st Street

Ownership:

Project description/benefits: High water from the Wishkah River overtops the river bank in the Market Street area. If half the road and sidewalk were raised it would create a small dike which would not protect from the 100 year event but would greatly reduce the frequency of flooding experienced. Prevents flood waters from entering that area of the community.

Approximate cost: \$483,000

Next steps: Concept Plan – 24 months

Project Subcommittee Recommendation: More information is needed from the City of Aberdeen with respect to the selection criteria.. Source is from the City of Aberdeen Public Works Master Project List (January 2011)

Southside Dike (Levee) certification (#26-viii on the Project Matrix)

Location: Aberdeen - Southside Dike – South Aberdeen

Ownership:

Project description/benefits: In order for the current flood protection status of South Aberdeen to be recognized Aberdeen needs to complete a certification process for its Dike even though it was designed and built by the Army Corps of Engineers. This process is ongoing and is being done in-house. It is anticipated to be completed within the year. There may be some dike improvements needed to meet the certification requirements. This project documents effectiveness of existing diking system.

Approximate cost: \$50,000

Next steps: Project is in process. Work is being completed in-house and will be completed within one year.

Project Subcommittee Questions: Does this produce jobs? Are more funds needed?

SUBSECTION (3) UP TO \$2,075,000 FOR "MODIFICATION OF THE SICKMAN FORD BRIDGE, AND FLOODPLAIN CULVERTS, TO OPEN UP THE CHANNEL, INCREASE CONVEYANCE, AND ALLOW FOR FLOOD RELIEF"

Sickman Ford Bridge

Location: Grays Harbor County

Project Description: Project information is being developed by the Chehalis Tribe.

Project Subcommittee Recommendation: Additional opportunities for projects under this subsection are listed in the Proposed Project Matrix depending on the final cost estimate of the Sickman Ford Bridge Project.

SUBSECTION (4) UP TO \$50,000 FOR "INSTALLATION AND CALIBRATION OF A RAIN GAUGE ON THE CHEHALIS RESERVATION."

The Chehalis Tribe is researching potential locations for a gauge to better predict impacts to the Chehalis Reservation. This project is not on the Flood Authority's Project Matrix.

Project Subcommittee Recommendation: This project will be detailed by the Chehalis Tribe.

SUBSECTION (5): UP TO \$500,000 FOR "CONSTRUCTION OF EVACUATION ROUTES AND PADS TO AVOID FUTURE LIVESTOCK LOSS."

Establish critter pads to reduce livestock loss (#90 on the Project Matrix)

Location: Basin-wide

Ownership: Private land owners.

Next steps: The Lewis County Conservation District has already identified a number of potential locations with Lewis County, and is working to identify potential locations in Thurston and Grays Harbor County as well. In addition, the Conservation District is developing further descriptions and criteria for critter pads, analyzing the regulatory requirements, and working with the Washington Department of Ecology to see if a programmatic SEPA approval might be possible.

Project Subcommittee Recommendation: Allow the Conservation Commission and Conservation Districts to develop specific project lists to then be approved by the Flood Authority and Chehalis Tribe.

SUBSECTION (6): UP TO \$500,000 FOR "IMPROVEMENTS TO AREAS AFFECTED BY THE SATSOP RIVER".

Satsop Floodplain Restoration (#26-ix on the Project Matrix)

Location: Satsop River Floodplain

Ownership:

Project description/benefits: This Satsop River floodplain restoration project consists of approximately 100 ac. of floodplain habitat that is negatively impaired by approximately 5200 linear feet of constructed dike and approximately 2500 linear feet of rip-rapped riverbank. Since May 2001 the Satsop Committee (WDFW, Corps, Grays Harbor County, and local citizens) has met to develop a project approach to meet the needs of both fish and people. As a result the committee has worked with the Corps to develop a Channel Migration Study, Preliminary Restoration Plan and has recently been notified of the Corps approval to fund this project under Section 206 Ecosystem Restoration.

Throughout the past 1+ years the Satsop Committee has identified the dike, riprap, ponds, and excessive eroding banks as areas to focus restoration efforts. Beginning Fall 2001 the Corps will begin a study phase that will characterize baseline habitat conditions and identify potential improvements to these conditions through restoration actions. Proposed restoration activities will be analyzed using standard modeling techniques to determine if there are potential adverse affects from the restoration project. Once this phase is complete the Satsop Committee will decide on a restoration concept and design. The project is scheduled to be constructed the summer of 2004. The implementation of this project will restore floodplain functions and re-establish access to off-channel habitat.

Approximate cost: \$1,099,800

Next steps: Study Phase (Planning Phase) Plans and Specifications Construction; total, 2 years.

Project Subcommittee Recommendation: Find prior WEST Consultants report on this issue. Leave on the list for possible funding under ESB 5127.